**USDA – AMS PESTICIDE DATA PROGRAM**

**OVERVIEW OF 2008 FINDINGS**

- The USDA Pesticide Data Program (PDP) was initiated in 1991 to collect data on pesticide residues in food to develop a database for the Government in order to respond to pesticide issues related to food safety. The pesticide residue levels reported by PDP in the vast majority of samples tested are well below the tolerance levels for pesticides in foods set by the U.S. Environmental Protection Agency (EPA). PDP tests high consumption foods using highly sensitive instruments to detect pesticide residues as low as 0.001 ppm, which is considered trace levels of residues. Residues detected in foods tested by PDP are reported in a great majority of samples below 1 part per million (ppm). For illustrative comparisons, one part per million is the equivalent of one ounce of salt in a mountain of 62,500 pounds of sugar or to put it another way, one ounce of dye in 7,350 gallons of water.

- The reader is advised to compare the residue levels found by PDP to the EPA tolerance levels as showed in the table below. For example, the pesticide dicloran was found in 37 percent of celery samples tested in 2008; the highest level found was 1.5 parts per million (ppm). These results are significantly lower than the 2002 celery results for the same pesticide where dicloran was found in 46 percent of celery samples and the highest level was 18 ppm. The amount allowed by law for both years is 15 ppm. This lowering trend is observed for various "older" pesticides for which the EPA has modified uses or has approved "safer" pesticides for use in U.S. agriculture.

- In comparing pesticide residues found in celery in 2002 versus findings for 2008 there have been noticeable differences. Organophosphates, such as acephate, decreased from 48.7 of the samples tested in 2002 to 35.0 percent in 2008 and similarly, methamidophos decreased from 33.0 percent to 20.8 percent. Other older pesticides such as chlorothalonil and oxamyl showed the same trend decreasing from 62.2 to 29.8 percent and 36.9 to 16.3 percent, respectively. Newer and safer pesticides such as, azoxystrobin, methoxyfenozide, imidacloprid, and pyraclostobrin have been approved for use over the last eight years.

- When comparing pesticide residue data peaches over the same time period 2002 to 2008, significant changes in crop protection tools are evident. Some of the organophosphates, such as azinphos-methyl decreased from 46.5 percent to 25.6 percent of the samples tested, chlorpyrifos decreased from 35.5 to 17.2 percent, and phosmet 64.8 to 30.7 percent. For other old chemistry pesticides such as carbaryl, the change was from 32.3 to 9.7 percent and iprodione from 54.7 to 31.2 percent. These uses were replaced by safer pesticides such as boscalid, methoxyfenozide, and spinosad A.

- Results reflect findings per sample tested and cannot be directly correlated to residues per serving size. Sample size ranges from 16 ounces to 5 pounds depending on food tested. For example, for peaches and celery, the sample size is 5 pounds; for strawberries and blueberries is 3 pounds and 1 pound respectively.

- The number of pesticides detected per sample varies from food to food, ranging from 0 to as many as 13. There may be many more pesticides available for use by food producers, but 20 years of testing show that no food has ever been treated with all available pesticides.

- Pesticide residues found in each food vary from year to year. Pesticides detected in peaches and celery in 2001-2002 are different than those detected in 2008-2009, due to EPA's ongoing review of data to verify safety of pesticides used in food production to ensure protection of human health and the environment. PDP re-tests high consumption foods every 5 years or sooner if needed so that EPA has a current picture of residues in foods.

- Annual results of testing are released to the public via the Internet and are posted on this Website. Interested parties can also request additional information by sending an email to amsmpo.data@ams.usda.gov

# PDP Celery Comparison
# 2002 vs. 2008

| | 2002 | | | | 2008 | | | |
|---|---|---|---|---|---|---|---|---|
| Pesticide * | Mininum Concentration Detected (ppm) | Maximum Concentration Detected (ppm) | EPA Tolerance (ppm) | % of Samples with Detections | Mininum Concentration Detected (ppm) | Maximum Concentration Detected (ppm) | EPA Tolerance (ppm) | % of Samples with Detections |
| Acephate | 0.003 | 1.8 | 10 | 48.7 | 0.003 | 0.77 | 10 | 35.0 |
| Acetamiprid | | NA | | | 0.001 | 0.068 | 3.00 | 22.1 |
| Azoxystrobin | | NA | | | 0.0008 | 0.74 | 30.0 | 19.6 |
| Chlorothalonil | 0.004 | 11 | 15 | 62.2 | 0.013 | 0.90 | 15 | 29.8 |
| Cyromazine | | NA | | | 0.004 | 0.078 | 7.0 | 37.4 |
| Dicloran | 0.013 | 18 | 15 | 46.1 | 0.010 | 1.5 | 15 | 37.0 |
| Flonicamid | | NA | | | 0.002 | 0.16 | 0.40 | 13.3 |
| Imidacloprid | | NA | | | 0.001 | 0.032 | 6.0 | 27.7 |
| Linuron | 0.030 | 0.12 | 0.5 | 1.6 | 0.003 | 0.2 | 0.5 | 30.8 |
| Malathion | 0.003 | 5.5 | 8 | 25.8 | 0.003 | 0.74 | 8 | 19.3 |
| Methamidophos | 0.002 | 0.22 | 1.0 | 33.0 | 0.002 | 0.025 | 1.0 | 20.8 |
| Methomyl | 0.002 | 0.15 | 3 | 11.3 | 0.004 | 0.24 | 3 | 3.6 |
| Methoxyfenozide | | NA | | | 0.002 | 0.25 | 25 | 50.4 |
| Omethoate | 0.003 | 0.041 | 2 | 15.1 | 0.004 | 0.11 | 2 | 17.4 |
| Oxamyl | 0.002 | 0.31 | 3 | 36.9 | 0.006 | 0.096 | 10.0 | 16.3 |
| Permethrin cis | 0.025 | 0.32 | 5.0 | 19.9 | 0.004 | 0.20 | 5.0 | 39.0 |
| Permethrin trans | 0.025 | 0.32 | 5.0 | 16.3 | 0.004 | 0.19 | 5.0 | 42.0 |
| Propiconazole | 0.035 | 0.11 | 5.0 | 12.7 | 0.027 | 0.087 | 5.0 | 21.9 |
| Pyraclostrobin | | NA | | | 0.0018 | 0.24 | 29.0 | 11.9 |

* = Only pesticides with residue detections in at least 10 percent of samples for either year are shown.

NA = Not Analyzed. No samples were analyzed for that pesticide/commodity pair.

# PDP Peaches Comparison
# 2002 vs. 2008

| | 2002 | | | | 2008 | | | |
|---|---|---|---|---|---|---|---|---|
| Pesticide * | Mininum Concentration Detected (ppm) | Maximum Concentration Detected (ppm) | EPA Tolerance (ppm) | % of Samples with Detections | Mininum Concentration Detected (ppm) | Maximum Concentration Detected (ppm) | EPA Tolerance (ppm) | % of Samples with Detections |
| Azinphos methyl | 0.005 | 0.52 | 2.0 | 46.5 | 0.005 | 0.29 | 2.0 | 25.6 |
| Boscalid | NA | | | | 0.002 | 0.48 | 1.7 | 12.5 |
| Carbaryl | 0.002 | 3.2 | 10 | 32.3 | 0.002 | 1.9 | 10 | 9.7 |
| Chlorpyrifos | 0.002 | 0.079 | 0.05 | 34.5 | 0.003 | 0.11 | 0.1 | 17.2 |
| Cyhalothrin, Lambda | NA | | | | 0.005 | 0.032 | 0.5 | 22.8 |
| Esfenvalerate | 0.006 | 0.033 | 10.0 | 12.7 | 0.025 | 0.07 | 10.0 | 29.8 |
| Esfenvalerate + Fenvalerate Total | 0.006 | 0.35 | 10.0 | 11.6 | 0.0023 | 0.084 | 10.0 | 37.4 |
| Fenvalerate | 0.009 | 0.044 | 10.0 | 13.4 | ND | ND | 10.0 | 0 |
| Fludioxonil | 0.020 | 1.8 | 5.0 | 30.6 | 0.003 | 4.7 | 5 | 47.6 |
| Formetanate HCL | NA | | | | 0.0002 | 1.1 | 5.0 | 19.3 |
| Iprodione | 0.014 | 33 | 20 | 54.8 | 0.025 | 12 | 20 | 31.2 |
| Methamidophos | 0.001 | 0.49 | 0.02 | 12.6 | 0.002 | 0.023 | 0.02 | 1.5 |
| Methoxyfenozide | NA | | | | 0.002 | 0.18 | 3.0 | 14.9 |
| o-Phenylphenol | 0.005 | 0.046 | 20 | 7.3 | 0.017 | 0.038 | 20 | 16.3 |
| Phosmet | 0.002 | 1.4 | 10 | 64.8 | 0.005 | 0.82 | 10 | 30.7 |
| Propiconazole | 0.024 | 0.085 | 1.0 | 6.2 | 0.060 | 0.51 | 2.0 | 11.5 |
| Spinosad A | NA | | | | 0.003 | 0.026 | 0.2 | 19.4 |

* = Only pesticides with residue detections in at least 10 percent of samples for either year are shown.

NA = Not Analyzed. No samples were analyzed for that pesticide/commodity pair.

ND = Non-Detects. Samples were analyzed for that pesticide/commodity pair, but none had a residue detection.